

REMARKS

Before this reply, Claims 9-16 were pending in the patent application. Through this reply, new Claims 17-23 have been added. As such, Claims 9-23 are now pending in the patent application. New matter has not been added. The new claims are supported by the specification originally filed. Claim 9 has been amended to further clarify the claimed limitations.

Claims 9-16 were rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,198,479. Although Applicant traverses the rejections, in order to expedite prosecution, Applicant files a terminal disclaimer to overcome this rejection.

Claims 9-16 were rejected under 35 USC 103(a) as being unpatenable over Suzuki, T. et al. ("Suzuki"), "Teleoperation of multiple robots through the Internet," 5th IEEE International Workshop on Robot and Human Communications, November 11-14, 1996, pages 84-89, in view of Yokota et al. ("Yokota"), "A human interface system for the multi-agent robotic system," IEEE, 5/13/1994, pages 1039-1044, volume 2. The rejections are respectfully traversed because for at least the following reasons, the references, alone or in combination, do not disclose all of the claimed limitations.

Suzuki is non-analogous art. Suzuki's human interface system for teleoperating multiple robots connected to a LAN has nothing to do with a method for implementing command and

control for home devices via a home network, as claimed. A room in a plant with robots in it, where robots with cameras provide images, has nothing to do with the general understanding of a home network with home devices connected thereto, in the art. It is respectfully submitted that the Examiner's characterization of Suzuki's robots and a controlling computer as home devices is squarely outside the definition of a home network and home devices in the specification. There is no mention of a home, a room in a home, a LAN in a home, robots in a home or robots in a room in a home. Teachings of Suzuki cannot be applied to a home network for the reasons given above. If the claims are once again rejected, Applicant respectfully requests that the Examiner specifically reconcile the Examiner's interpretation of Suzuki and the aforementioned definitions in the specification of the present invention.

Suzuki does not disclose executing a software agent on the client device, wherein executing the software agent causes a user interface to be displayed on the client device, as claimed. Nor is there any suggestion in Suzuki (and the Examiner has not provided any other reference), which teaches such limitations. No software agent is needed or required in Suzuki for its intended purpose in Suzuki as hardware can accomplish the tasks in Suzuki. Further, Suzuki does not teach of executing a software agent that causes a user interface to be displayed on the client device, which displays a top list of devices that are connected to the network for individually selecting each of said devices, as claimed.

Suzuki does not disclose an operator selecting a first home device and a second home device from the user interface, as claimed. In Suzuki the operator commands a task and the

system determines the robots to perform the task, rather than the user selecting the robots. In Suzuki the operator commands a task (e.g., viewing an object) to an Operation Module without specifying which robot performs the task. Then, the Operation Module communicates with the robots to determine which robot(s) can perform the task, and commands those robot(s) to perform the task.

On page 85, right column, Suzuki describes the five modules as:

- (1) a Presentation Interface Module that accepts commands given by the operator and shows the condition of the system,
- (2) a Monitoring Module that gathers information in the system for monitoring purposes,
- (3) a Dialog Module that is responsible for coordinating message exchange between the operator and the robots,
- (4) an Operation Module that interprets commands into readable formats, and
- (5) a Communication Module that converts information from other modules into uniform protocol among robots .

Suzuki describes the operation of the five modules in Section 5.1 on pages 86 and 87 in conjunction with Fig. 3, wherein Suzuki states that:

- (1) in Step 1 a WWW server receives task commands from an operator,
- (2) in Step 2 the WWW server invokes the Operation Module,

(3) in Step 3 the *Operation Module consults an operation database and determines necessary facilities and operations for the given task and allocates robots available for the task,*

(4) in Step 4 the Communication Module transmits commands to the available robots to perform the requested task,

(5) in Step 5 the available robots reply to the task request and the *Operation Module negotiates with those robots through the Communication Module to specify the robots that execute the task,*

(6) in Step 6 after the robots complete the tasks they send status data to the Monitoring Module through the Communication Module,

(7) in Step 7 the Monitoring Module saves that data and provides that data to the WWW server, and

(8) in Step 8 the WWW server presents that data in the Presentation Interface Module for the operator (emphasis added).

As is clear from the above passage, an operator does not control a robot, rather the Operation Module does. The operator specifies a task (e.g., “observing an object”), and does not control a specific robot from a control computer. Rather, the Operation Module in Step 3 above negotiates with the robots and selects/controls the robots that can perform the task.

The Operation Module is a task manager that manages the robots to perform an operator requested task and ensures the cooperative operation of the robots. Suzuki does not allow an

operator to control an individual robot for a task because it would interfere with Suzuki's system of simultaneous multi-robot operation. This is important because multiple operators (Fig. 2) can request tasks to be performed by the limited number of robots and the Operation Module ensures that the different tasks get done by the available robots. Otherwise, without the Operation Module, if multiple operators (see Fig. 3, multiple Presentation I/F Modules) control the same robot for a task, there would be contention. Further, if multiple robots are controlled by multiple operators without task scheduling and management by the Operation Module, the robots can, for example, physically collide into one another.

The Examiner's interpretation of Suzuki as allowing operator selection/control of individual robots goes against Suzuki's explicit details of a command log from the WWW server in Figure 6(a) of Suzuki, wherein it is clear that in performing a task, the Operation Module, not the operator at a control computer, communicates with individual robots. Suzuki explicitly states:

“When the operator requires observation task, the Operation Module broadcasts a task request message to the robot ID ‘**Cm****’. Since all of the robots know their own ID, the robots carrying cameras reply to the Operation Module”

(Suzuki, page 87, section 5.2).

Therefore, despite the Examiner's interpretation, Suzuki does not state that when the operator requires an observation task, the operator selects/commands an individual robot from a control computer. And, there is no operator selection/control of an individual robot for an observation task from a menu. Suzuki does not provide such a feature.

The Examiner relies on the Control Panel for Individual Robot in Fig. 4 of Suzuki. In Figure 6(a) of Suzuki, all robots having a camera (i.e., “****Cm****”), are specified, not an individual robot selected/controlled by an operator from a control computer. Suzuki explains:

“Assuming inspection tasks of a plant, we execute an observation task with giving commands to the robots by clicking an object on the environment map shown in Fig. 4.... Figure 6 shows a part of communication logs between the WWW server and the robots. The WWW server required observation tasks to the robots’ ID ‘***CM***’. The robot 1 and robot 2 which had cameras replied to the WWW server.” (Suzuki, page 88, section 5.3, second paragraph, emphasis added).

This clearly shows that the Control Panel for Individual Robot is not for selecting a robot for a command.

Further, as Suzuki does not disclose sending control and command data from the client device to the first and second home devices to cause the first and second home device to communicate with each other to perform the service, as claimed. The Examiner states that Yokota discloses such limitations. Applicant respectfully disagrees.

Yokota is non-analogous art for at least reasons similar to that provided above in relation to Suzuki.

On page 1039, at bottom right, Fig. 1, and item 6 on page 1041 (relied on by the Examiner), Yokota mentions that an operator assigns a mission to the system (item 5), and by default robots act independently and as need arises, a robot may cooperate with another. Therefore, as in Suzuki, in Yokota the operator assigns a task to the system which selects the robots to accomplish that task, and the robots are not required to cooperate. If the robots decide to cooperate (item 6), it does not require operator command and control from a GUI. By contrast, as claimed herein, both the first and second home devices are selected from a user interface, and the selected devices are commanded to communicate and cooperate to accomplish a task. Therefore, Yokota, alone or in combination with Suzuki, does not teach or fairly suggest: “sending control and command data from the client device to the first and second home devices to cause the first and second home device to communicate with each other to perform the service,” as required by Claim 9. For at least these reasons, rejection of claim 9, and all claims dependent therefrom (claims 10-16) should be withdrawn.

As per claim 10, Suzuki does not disclose a session manager program for acting on behalf of the user and for assisting the user which displays a top list of devices that are connected to the network for individually selecting each of said devices, as claimed.

As per claim 11, Suzuki (Fig. 4) only shows one robot control panel, however Suzuki does not disclose: “wherein the client device includes a generator that generating a human graphical user interface (GUI), and the step of executing the session manager on the client device includes the step of generating and displaying on the client device a graphics user interface

object page containing device buttons associated with the first home device and the second home device,” as claimed.

As per Claim 12, Suzuki’s mention of a browser in WWW does not teach: “wherein the client device includes a browser for generating a human graphical user interface (GUI),” as required by claim 12. Nor does Suzuki’s mention of HTML disclose: “wherein the graphics user interface is coded in HTML, wherein the HTML coded graphics user interface object includes a page containing device buttons associated with the first home device and the second home device,” as required by claim 13.

As per claims 14 and 15, the concepts of source and sink devices are non-existent in Suzuki and Yokota. It is respectfully submitted that Examiner’s interpretation of source and sink devices in Suzuki and Yokota are completely outside the scope of the references, and outside the scope of such terms in the specification.

As per claim 16, Suzuki does not disclose user selection of first and second robots. Further, Suzuki does not disclose: “the step of selecting the first home device includes the step of reading a first home device capabilities file, wherein the first home device capabilities file identifies the capabilities of the first home device; the step of selecting the second home device includes the steps of reading a second home device capabilities file, wherein the second home device capabilities file identifies the capabilities of the second home device, and further including the step of matching contents of the first and second home device capabilities files,”

are required by Claim 16. There are no steps of reading and matching contents of capabilities files in Suzuki. Again, it is respectfully submitted that the Examiner is reading disclosure into Suzuki that is not there.

New claims 17-23 include further limitations, not disclosed by the reference alone or in combination for at least the above reasons, and are therefore allowable.

For at least these reasons, and other reasons, Applicant believes that the claims should be allowed.

CONCLUSION

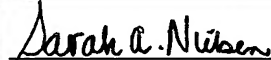
If the Examiner believes that telephone interview will help further the prosecution of this case, Applicant respectfully requests that the undersigned attorney be contacted at the listed telephone number.

If necessary, the Commissioner is hereby authorized to charge payment or credit any overpayment to Deposit Account No. 01-1960 for any additional fees required in connection with this filing. A duplicate copy of this page is enclosed for this purpose.

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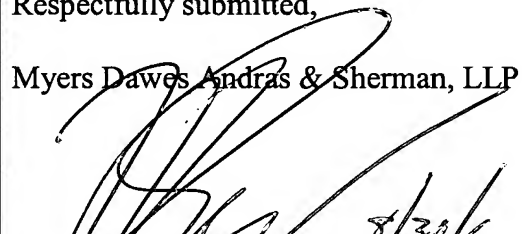
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